

## **REMARKS**

### **File History**

In the Office action of 5/28/2004, the following rejections, objections were made:

> Claims 11 and 14 were rejected under 35 USC §103(a) as being obvious over Cairnes (US Pat. 6,139,494) in further view of Britton (US Pat. 6,650,238, app filed 9/5/1997).

> Claims 12-13, 15-16 were rejected under 35 USC §103(a) as being obvious over Cairnes taken alone.

> Claims 1-6 were rejected under 35 USC §112, paragraph 2, for indefiniteness.

> The ABSTRACT was objected to.

Additionally, claims 7-10 and 17 were allowed as originally filed.

### **Summary of Current Response**

Claims 1, 2, 6, 11-16 are amended.

Claims 18-40 are newly introduced.

The Abstract is amended.

Arguments are presented concerning the applied art and its proposed combination and/or modification.

### **The Relevant Art and Level of Ordinary Skill**

Conventionally, in the medical care delivery field, doctors are not intimately involved in the design of care-automating systems.

Instead, the people who are involved are computer programmers and computer system engineers. These non-physician practitioners speculate on what types of automation they, the non-doctor professionals, believe will improve care delivery within a real-world health practice. They then offer a pre-designed automated system to the doctors, on a take-it-as-is or not at all basis without themselves trying out the system in the role of being a doctor. The problem is that the computer-specialists do not see the world from the view point of a practicing doctor. They cannot, because they are not practicing physicians. Therefore they cannot readily appreciate what concerns plague the every-day and every-second thoughts of a hands-on practicing physician.

One of the biggest concerns for doctors and medical practice groups is how to minimize exposure to legal liability for malpractice. Malpractice happens most often because one of hundreds of patients slips through the cracks. Modern economic pressures force doctors to see ever larger volumes of patients each day and to make quick decisions, sometimes, life and death decisions. Less and less time is given to the modern doctor to reflect on, and to follow up on, the condition of an individual patient. There is an ever growing danger, despite the best of intentions, that an isolated patient will fall between the cracks (so to speak) and suffer catastrophic damage.

Computer system experts generally do not think along such lines. Instead they think about "the machine" and its efficiency and its reliability. But "the machine" is not where the biggest pitfall lies. Instead, the more damaging dangers lie in the human failings of people; of the doctors, nurses and other assistants, who field questions from large pools of patients, receive reports from many labs and schedule appointments for patients. Equally important are the human failings of the patients themselves, who sometimes fail to follow through on medical instructions.

The Cairnes reference (6,139,494) provides a good examples of where the prior art misses the mark. Note that in the "Appointments" making description of Cairnes at col. 11, lines 12-21 it is the "nurse" alone who is made responsible for initiating the scheduling of an

appointment. Note further in the "Interviews" conducting description of Cairnes at col. 11, lines 22-34 and also in the measurement taking description -- see col. 14, lines 22-59 re initial step 606 of Fig. 12-- that it is the nurse or another single human (the "patient") who is made responsible for initiating and/or following through. The Cairnes patent assumes that the patient has a chronic medical condition such as diabetes, high blood pressure, etc. which is why Fig. 4 shows in box 108 (top) an at-home medical device/appliance such as "a weight scale, smartcuff, heart rate monitor, blood-glucose monitor and ECG." (col. 11, lines 61-66). See also Cairnes at col. 1, lines 38-52: "The invention helps ... [with] .. the long term care and support of stable, non-acute outpatients who require [at home] monitoring and **self care**. ... Examples include chronic illnesses --hypertension, asthma ..." (bracketed text, bolding, underlining added). It is assumed by Cairnes that the nurse will routinely initiate the sending of an appropriate message and that the message will get through, and that the patient will actually read and comprehend the electronically transmitted message. See again, Cairnes col. 14, lines 22-59 and Fig. 12 ("The nurse at PHA 120 ... sends messages 608"). Cairnes fails to account for a situation where a doctor writes a note to his nurse to schedule an appointment and the nurse doesn't get the note, or loses the note. Cairnes fails to account for a situation where a nurse forgets to initiate an interview. Cairnes fails to account for a situation where the telecommunications link is temporarily broken and the nurse and/or patient fail to follow up by making persistent retries. Cairnes fails to account for a situation where the telecommunications link works but the patient fails to timely pick up the phone (i.e. his answering machine picks up the message and perhaps he or someone else erases the message inadvertently before the patient has a chance to hear and comprehend it).

Cairnes places responsibility on the "patient" to follow through with critical steps: at col. 14, line 49, it is the "Patient 108 [who] transmits the medical readings ... to PHA 120." See also col. 14, lines 25-26: "inform the patient of "when", "how" and "what" patient 108 is to electronically transmit to PHA 120." (emphasis added). Note more specifically for col. 11, lines 31-34 of Cairnes that there is no consideration for what happens if the patient fails to be truly notified "immediately" by the at-home device (appliance) 110 because the patient has stepped away from the machine and someone else has turned off the screen in the interim. There is no consideration for what happens if the patient fails to "contact the nurse" (col. 11, line 32) or if the nurse fails to "immediately contact [the] patient" (col. 11, line 33) because

one of these people got distracted by another event and then simply forgot to follow through with the original task. Cairnes fails to recognize the problem and fails to provide solutions.

The present application is unusual in that one of the co-inventors, Dr. Seymour Rapaport, is a practicing physician. He was instrumental in formulating the interfaces and persistent follow-ups disclosed in the present application. The Examiner is indeed correct in finding that Cairnes fails to provide an interview completion checking means (Office action, page 3, re claim 11). Cairnes places the responsibility entirely in the patient's side of the court at col. 14, lines 39-41: "[The] electronic interview ends when patient 108 completes entry of interview responses to the patient's satisfaction [!!!]" (emphasis added). This is exactly the kind of problem rampant in the prior art. Heretofore, ordinary artisans in the field did not contemplate the possibility that an automated interview would not be timely conducted (too late, or not at all) for any of a large variety of reasons: i.e., the patient has gone off to visit relatives and is not answering his home telephone or the patient is passed out on the floor and cannot respond in that state. Even if there were a motivation to combine Britton with Cairnes (which Applicants disagree with), the combination would still not work in the given examples where the phone works but the patient does not respond in a comprehending way. More specifically, in a proposed combination of Britton with Cairnes, the telecommunications link (112) between the home appliance (110) and the central system (120, see Cairnes Fig. 1) may be fully operative, the home appliance may automatically "check in" (using the Britton terminology for watchdog integrity checking) with the central system at the appointed time, all parts of "the machine" would be talking to each other nicely and yet the human patient still does not actually get the interview and carry it out in timely fashion because he/she is not at home or is otherwise not interacting with the machine system.

It is only with benefit of hindsight that one might think to develop a persistent and pestering machine that automatically tracks "the patient" down to make sure the interview is actually conducted with the human patient, or if not successful within a given time limit, automatically alerts responsible persons to the fact that the interview was not timely conducted.

## Traverse of Obviousness Rejection against Claim 11

As indicated immediately above, the Applicants respectfully disagree with the assertion that there was motivation to combine Britton with Cairnes. These references are not in the same field of endeavor. Britton is directed to a system where there is no communication with a human being (let alone a medical communication involving a human patient). Instead, Britton requires an automated, "remote communicator" machine to automatically deliver a promised "check-in" to the automated central system. See col. 2, lines 56-67. There is nothing "urgent" about the routine, watchdog check-ins as the outstanding grounds of rejection try to suggest. Instead, they occur at "regular intervals" (col. 8, line 67). The outstanding Office action tries to assign a broad designation to Britton and Cairnes, namely, that of both of them being related to "monitoring alarm system[s]". However, this is too broad and unreasonable to support the specific combination of Britton with Cairnes, and it smacks of hindsight because, as the Examiner indirectly admits, Cairnes fails to recognize any problem related to the patient not timely carrying out an interview. (Cairnes teaches away by placing sole responsibility in the patient's hands to complete an interview.) Britton fails to recognize any problem related to a human patient not timely carrying out an interview.

Even if arguendo, Britton could be permissibly combined with Cairnes., the combination would fail to recreate the subject matter recited in Claim 11. Neither of Britton and Cairnes discloses "(a) interview formulation assisting means for assisting a user in formulating and customizing a target-customized interview that is to be delivered to one or more targeted persons" (emphasis added, purpose of the current amendment, ala-Festo will be discussed below).

Note in Fig. 13 of the present disclosure that the doctor is able to customize an interview by identifying a specific "Diagnosis" (Box 1304) and by identifying patient specific attributes such as patient "Height" (Box 1307). Note in Fig. 14 of the present disclosure that the doctor is able to customize an interview by specifying when a particular follow-up test is to be completed by (Box 1406). Note in Fig. 16 of the present disclosure that the doctor is able to review the interrelationships of various disease factors for this one patient (Box 1603 - which shows that this specific patient not only has a history of "Asthma" 1611, but also high blood pressure (Hypertensive) and other problems). The custom formulated interview does not have to be a boilerplate interview for a singular disease (which amounts to viewing the

patient not as a total human being, but rather as a "disease"). The doctor can personalize the interview so that it corresponds specifically to the one patient and all his/her unique problems. Under In re Donaldson, the reasonable broad interpretation of a means element in a claim cannot be carried out without reference to the written description. Figs. 13, 14, 16 are part of the written description. Neither of Britton and Cairnes discloses something equivalent to the recited "(a) interview formulation assisting means".

A word (for Festo purposes) about the current amendments made to Claims such as 11 and 14. The amendments were not made to overcome the proposed combination of Britton and Cairnes. The above arguments suffice to show that an artisan could not reasonably see how Britton and Cairnes would lead to making sure the patient has timely completed an interview. Rather, the current amendments made to Claims such as 11 and 14 were made to help the Examiner better understand what "interview formulation assisting means" refers to, given the length and details of the present disclosure.

Even if arguendo, Britton could be permissibly combined with Cairnes., the combination would fail to recreate the subject matter recited in Claim 11. Neither of Britton and Cairnes discloses "(c) interview completion checking means for automatically checking that a scheduled interview was timely conducted with a corresponding one of said one or more targeted persons, or if not, for automatically alerting a responsible person of the in completion of the scheduled interview " (emphasis added, purpose of the current amendment, ala-Festo will be discussed below).

The Examiner concedes that Cairnes fails to teach element (c). The added text was not necessary because the present disclosure defines interview as being with a person. There are no interviews with persons in Britton. One machine (the remote home machine) simply checks-in with the central machine to verify linkage integrity. It is purely a machine-to-machine communication. Thus, once again, the proposed combination of references fails to recreate the claimed subject matter.

A word (for Festo purposes) about the current amendment re "timely conducted with a corresponding one of said one or more targeted persons". The specification makes it clear that interviews are formulated for, and conducted with, specific human patients. The amendments were not made to overcome the proposed combination of Britton and Cairnes. Rather they

were made to help the Examiner better understand what "interview timely conducted" refers to, given the unusual length and amount of details of the present disclosure.

### **Traverse of Obviousness Rejection against Claim 14**

The outstanding grounds of rejection assume that Claim 14 is similar to Claim 11. It is not. The "interview conducting means" (a) of Claim 14 collects data "representative of responses and non-responses, if any by the target person to the delivered interview" (emphasis added). It is inherent in the claim language that the interview has been delivered. However, the targeted person may still refuse or be unable to respond to certain inquiries. Sometimes the non-response is not important and sometimes it is a medically-important indicator. The "(b) alert generating means" of Claim 14 analyzes the collected data, including collected data representative of non-responses, if any, and then based on rules it selectively issues an alert, if warranted by a particular non-response as well as by a particular response. Not everything that is not quite right warrants an alert. Britton does not teach anything relating to non-responses by humans. The check-in of Britton is not a response to a delivered interview. Cairnes does not teach anything relating to non-responses by patients. Cairnes assumes that the responsibility for completing an interview will be entirely in the patient's side of the court at col. 14, lines 39-41 where he states: "electronic interview ends when patient 108 completes entry of interview responses to the patient's satisfaction " (emphasis added). Thus Claim 14 is patentably distinguishable over the art of record.

Note in Fig. 40A of the present disclosure that the Collected/Collectable Data (bottom right) of Patient-Z's Dialog 4069 is available for the channel manager to scan and return via path 4070' back to the database for generating alerts 4073. The Specification states at paragraph [0590]:

"Delivery-Attempts information acquired during the interaction 4068 with Patient-Z may be reflected back into the delivery strategies 4072 that are stored within the database for Patient Z. Particular pieces of information or lack thereof may cause the System to generate Alerts 4073 in response to what happened when Dialog 4069 was delivered or attempted to be delivered to Patient Z." (emphasis added)

The specification explains that, in one embodiment, interviews are composed of shorter Dialogs. Interviews can change on the fly as a result of information collected during a given first dialog (this is also detailed in paragraph [0590]) so that a different one of possible second dialogs is conducted. See paths 3918 and 3919 of Fig. 39A.

### **Traverse of Obviousness Rejection against Claims 12-13**

Claim 12 describes two data structures such as those for example shown in Fig. 39A as Decision Tree 3916 and Presentable Data structure 3912. The outstanding grounds of rejection assume that Cairnes has such structures even though no such things are disclosed. The outstanding grounds of rejection are therefore built upon pure speculation and no evidence. Reconsideration is respectfully requested.

As explained above, interviews may be constructed as a plurality of dialogs. During a first dialog, a patient's response may constitute a patient-selected navigation along path A or along path B of a pre-designed decision tree (e.g., 3915 inside box 3910 of Fig. 39A). One of the things the local system (at home machine) does, is to decide what information to next present to the patient because he/she chose path A rather than path B. In a boiler plate system, the presented data is rigid and not customized to the particular patient. By contrast, the Presentable Data structure 3912 of Fig. 39A may be custom tailored to the one unique patient.

Claim 13 depends from 12 and should be allowable at least for reasons applied to 12. Moreover, Claim 13 recites a collectable data section such as item 3917 shown in Dialog box 3910 of Fig. 39A. (The amendment is made only for clarity and not in view of applied art. The adaptive interview is real time per Claim 12.) It is seen that Dialog number 0 can be in a "current state 3916" and that certain response data will have been collected at that state and other response data will have not been collected due to a variety of reasons, including that the patient navigated down the right side of tree 3915 rather than down the left, thus leaving interview questions of the left side as never having been asked, let alone answered. The collected/collectable data section 3917 would indicate such response and non-response data that had been generated during the automated carrying out of the real-time adaptive dialog represented by tree 3915. Another reason why the collected/collectable data section 3917 might be partially empty (thus storing non-response data) is because the patient stopped at



state 3916. The system does not need to have a patient complete an interview. The failure of a patient to "timely" complete an interview is a triggering event by itself. moreover, note in paragraph [0578] of the specification that the system can redeliver "the whole (or an unfinished part, in one embodiment) of the current Dialog (e.g., Dialog 0) at a future time, which future time will be determined according to scheduling rules". In contrast, Cairnes requires that the patient complete an interview entirely on his own initiative and that a nurse should initiate the interview. Thus the Cairnes system has at least two weak points in its chain of responsibilities. If the nurse fails to initiate the interview the whole system collapses. If the patient fails to complete and transmit the interview back to the PHA, the whole system collapses.

The outstanding grounds of rejection use selective picking and choosing to point to Cairnes col. 11, lines 30-33. This is adjacent to the part where the human nurse is made responsible for transmitting the questions to the patient's machine (lines 24-27). It is also adjacent to the part where the human patient is made responsible "to contact the nurse." However, in another part of Cairnes' teachings, it is made clear that the patient must complete the interview before the results are transmitted to the PHA. See again, col. 14, lines 38-41 where Cairnes states: "[The] Patient 108 responds to each interview question. ... the electronic interview ends when patient 108 completes entry of interview responses to the patient's satisfaction " (emphasis added). In other words, the patient is not allowed to have non-responses. He/she must "respond[] to each interview question." The results do not go back to the PHA until the patient has answered all the interview questions and indicates he/she has done so to his/her "satisfaction".

### **Traverse of Obviousness Rejection against Claim 15**

With respect to Claim 15, the outstanding grounds of rejection admit that Cairnes fails to teach automated scheduling. It is respectfully submitted that this is only half the story. Cairnes teaches to make the nurse responsible for transmitting interviews to the patient. Thus Cairnes teaches away. The mere fact that Cairnes relies on the public telephone system does not make it obvious to use a plurality of channel managers. The Office action is using Applicant's claim as a blueprint against itself. This is impermissible.

### **Traverse of Obviousness Rejection against Claim 16**

With respect to Claim 16, see paragraph [0592] and Figs. 40A-40B. Interviews are formulated as instantiations under the illustrated, object-oriented server. Each organization (or application) can have its own template of instantiation rules. Each person (e.g., patient or doctor) can have different attributes depending on what role the person plays within a given organization/application. In other words, even though Mark Wellsbee might be an ear-nose doctor under organization X, he might still be a gastric patient when interacting with organization Y. His role changes from organization to organization. The communications rules that apply should therefore change accordingly. Cairnes fails to teach or suggest any of this. The outstanding grounds of rejection are based purely on using Applicant's own disclosure as a blueprint against Applicant. As already explained above, Cairnes expects the human nurse to initiate interview transmissions and Cairnes expects the human patient to complete and return the results. The database 130 of Cairnes Fig. 4 is shown as receiving only the patient record data (184). The communications software 118 is separate and the decision support software 126 is separate. Cairnes does not remotely suggest the idea of integrating different rules of different organizations within a server so that the server can formulate instantiations of interviews according to the different rules.

**Request for Examination and Allowance**

Examination is respectfully requested for the amended application. In view of the above, it is respectfully submitted that all of Claims 1-17 and all of new Claims 18-40 should be in condition for allowance in view of the art of record. A telephone call to the below attorney is requested if it will help expedite processing of the application.

A one month extension of time is requested. (See accompanying request for extension of time.)

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-2257 for any matter in connection with this response, including any fee for extension of time and/or fee for additional claims, which may.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 28, 2004.



Attorney for Applicant(s)

9-28-2004

Date of Signature

Respectfully submitted,



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**CLAIMS LISTING**

1. (*currently amended*) A machine-implemented method for notifying at least one care-concerned person ~~such as a medical service provider or a medical assistant~~ to a health or medical care-related situation constituted by at least one of the following notification-worthy situations:

- (0.1) completion of a care-related task where said task completion calls for relatively prompt attention thereto;
- (0.2) in-completion of a care-related communication delivery-attempt where said in-completion of the delivery-attempt calls for relatively prompt attention thereto;
- (0.3) in-completion of a care-related task where said in-completion of the care-related task calls for relatively prompt attention thereto;
- (0.4) an unexpected change or a lack of expected change in a medical condition of a given patient where said unexpected change or lack of expected change calls for relatively prompt attention thereto; and
- (0.5) an apparent failure to notify a primary medical service provider, or a primary medical assistant as may be appropriate, of one of the above notification-worthy situations;

where said machine-implemented alerting method comprises:

(a) monitoring communications related to progress or lack of progress in timely completion of pre-scheduled, care-related tasks and related to timely completion of pre-scheduled, care-related communication delivery-attempts and related to medical conditions of respective ones of plural patients;

(b) identifying among the monitored communications those which are indicative of at least one of said care-related situations that call for relatively prompt attention thereto by a care-concerned person ~~such as the medical service provider and the medical assistant~~, where criteria for determining whether or not a given situation is one that calls for relatively prompt attention thereto are machine-defined and where timeliness of pre-scheduled ones of said care-related tasks and care-related communication delivery-attempts are machine-defined; and

(c) for an identified one of the monitored communications which is indicative of at least one of said care-related situations that call for relatively prompt attention thereto, initiating a delivery-attempt for delivering to at least one targeted recipient in a group comprised of said a medical service provider and a medical assistant an alert signal for notifying the targeted recipient of the monitored and identified communication.

2. *(currently amended)* An alerting mechanism for summarily alerting a care-concerned person ~~such as a medical service provider or a medical assistant~~ to a care-related situation constituted by at least one of the following situations:

- (0.1) completion of a care-related task where said task completion calls for relatively prompt attention thereto;
- (0.2) in-completion of a care-related communication delivery-attempt where said in-completion of the delivery-attempt calls for relatively prompt attention thereto;
- (0.3) in-completion of a care-related task where said in-completion of the care-related task calls for relatively prompt attention thereto; and
- (0.4) an unexpected change or a lack of expected change in a medical condition of a given patient where said unexpected change or lack of expected change calls for relatively prompt attention thereto;

where said alerting mechanism comprises:

(a) action requesting means for advising the care-concerned person of an attention-giving action that is to be provided by the care-concerned person or delegated to another care-concerned person in response to an alerted situation;

(b) topic defining means for advising the care-concerned person of the medical concern that is addressed by the alerted situation;

(c) patient identifying means for advising the care-concerned person of the identity of one or more patients associated with a corresponding attention-giving action and a corresponding medical concern that is addressed by the alerted situation; and

(d) situation identifying means for advising the care-concerned person of a situation type to which the alerted situation belongs.

3. (*original*) The alerting mechanism of Claim 2 wherein:

(a.1) said action requesting means includes means for advising the care-concerned person to at least provide an attention-giving action selected from the attention-giving group consisting of:

(a.1a) initiating a sending of test results to a tested patient to at least thereby let the tested patient know that the results have been received by the care-concerned person;

(a.1b) reviewing contents of an automated or semi-automated interview conducted with a corresponding patient; and (a.1c) becoming aware of a failed attempt to deliver a communication relating to a corresponding patient;

(b.1) said topic defining means includes means for advising the care-concerned person of at least one of the medical concerns in a topic group consisting of:

(b.1a) an identifier of a blood component that is of concern;

(b.1b) an identifier of a chronic disease that is of concern;

(b.1c) an identifier of an on-setting disease that is of concern;

(b.1d) an identifier of a body part or body system that is of concern; and

(b.1e) an identifier of a type of test or other medical procedure that is of concern; and

(d.1) said situation identifying means includes means for advising the care-concerned person of at least one of the situation types in a situation type group consisting of:

(d.1a) a retrieval failure situation in which a corresponding communication delivery attempt was not timely or fully completed; and

(d.1b) an information-triggered situation in which information gathered during a corresponding communication delivery attempt triggered the alerted situation.

4. *(original)* The alerting mechanism of Claim 2 and further comprising:

(e) topic category defining means for advising the care-concerned person of a system-supported category encompassing the medical concern that is addressed by the alerted situation.

5. *(original)* The alerting mechanism of Claim 2 and further comprising:

(e) privilege controlling means for controlling alert-disposing privileges of pre-specified ones of care-concerned persons to certain classes or specific ones of attention-giving actions.

6. *(currently amended)* A follow-up scheduling and monitoring mechanism for automatically assisting a care-concerned person ~~such as a medical service provider or a medical assistant~~ in scheduling one or more health or medical care follow up actions following a first care-related situation constituted by at least one of the following situations:

(0.1) completion of a first examination where an initial assessment of patient condition was made and one or more follow up medical tests were ordered;

(0.2) in-completion of a care-related communication delivery-attempt where said in-completion of the delivery-attempt calls for relatively prompt attention thereto;

(0.3) in-completion of a care-related task where said in-completion of the care-related task calls for relatively prompt attention thereto; and

(0.4) an unexpected change or a lack of expected change in a medical condition of a given patient where said unexpected change or lack of expected change calls for relatively prompt attention thereto;

where said follow-up scheduling and monitoring mechanism comprises:

(a) adaptive scheduling means for adaptively scheduling one or more attention-giving, follow up actions that are to be provided chronologically in response to the first care-related situation; and

(b) patient attribute defining means for defining one or more health-related attributes of the under-care patient which can affect the carrying out of said, one or more attention-giving, follow up actions that are to be provided.

7. *(original)* In a machine-implemented, communications managing and delivering system having at least one of:

(0.1) filtering means for automatically identifying intervention-worthy communications which are worthy of being reviewed by a human intervener; and

(0.2) task in-completion detecting means for automatically detecting note-worthy failures to complete attempted communications and/or note-worthy failures to complete scheduled action items;

where the communications managing and delivering system further includes an alert generating means for generating alert reports indicative of at least one category of said intervention-worthy communications, note-worthy failures to complete attempted communications, and note-worthy failures to complete scheduled action items;

an alerts summarizing mechanism comprising:

(a) prioritizing means for prioritizing alert reports according to their comparative intervention-worthinesses or note-worthinesses, where said comparative worthiness characteristics are machine-defined; and

(b) target-person identifying means for identifying a target-person to whom one of said intervention-worthy communications is to be sent, or on whose behalf a note-worthy failure to complete an attempted communication occurred, or on whose behalf a note-worthy failure to complete a scheduled action item occurred.

8. *(original)* The alerts summarizing mechanism of Claim 7 and further comprising:

(c) summarized alerts reporting means for reporting summarizations of the prioritized alert reports to at least one person responsible for reacting to the



alert reports; and

(d) details providing means for providing more details about an alert report summarized by one of the reported summarizations in response to the at least one responsible person selecting one of the reported summarizations.

9. *(original)* The alerts summarizing mechanism of Claim 8 and further comprising:

(e) delegation means for allowing said at least one responsible person to delegate to at least a second responsible person with instructed actions and by way of said communications managing and delivering system, the responsibility of reacting to a selected one or more of the alert reports.

10. *(original)* The alerts summarizing mechanism of Claim 8 and further comprising:

(f) delegation tracking means for allowing said at least one responsible person to track the carrying out of respective ones of said instructed actions by the at least second responsible person to whom was delegated the responsibility of reacting to respective ones of said alert reports.

11. *(currently amended)* A machine-implemented, communications formulating, managing and delivering system comprising:

(a) interview formulation assisting means for assisting a user in formulating ~~an~~ and customizing a target-customized interview that is to be delivered to one or more targeted persons;

(b) interview delivery scheduling means for scheduling time ranges in which attempts will be automatically made to deliver one or more formulated interviews; and

(c) interview completion checking means for automatically checking that a scheduled interview was timely conducted with a corresponding one of said one or more targeted persons, or if not, for automatically alerting a responsible person of the in-completion of the scheduled interview.

12. (*currently amended*) An automatic and adaptive dialog conducting mechanism for use in a communications managing and delivering system where the communications managing and delivering system stores attributes describing potential target persons to whom communications may be sent; and where

said automatic and adaptive dialog conducting mechanism comprises:

(a) a decision tree having one or more dialog flow paths that are to be automatically followed during automated carrying out of ~~the~~ a real-time adaptive dialog, where the one or more dialog flow paths that are followed can be selected in real time response to answers or lack of answers provided by the communication target person; and

(b) a presentable data section for storing content-variable data that is to be automatically presented at respective nodes of the decision tree, where the content-variable data ~~may~~ can be automatically generated in response to stored personal attributes of the communication target person.

13. (*currently amended*) The adaptive dialog conducting mechanism of Claim 12 and further comprising:

(c) a collectable data section for storing response and/or non-response data generated during the automated carrying out of the real-time adaptive dialog.

14. (*currently amended*) A machine-implemented, communications delivering and response collecting system comprising:

(a) interview conducting means for automatically delivering an interview through a communications channel to a target person and for automatically collecting data representative of responses ~~or~~ and non-responses, if any by the target person to the delivered interview; and

(b) alert generating means for automatically analyzing said collected data representing the responses ~~or~~ and non-responses, if any by the target person to the

delivered interview and for selectively and automatically generating an alert signal in accordance with alert rules provided within the system.

15. *(currently amended)* A machine-implemented, communications delivering system comprising:

(a) a plurality of channel managers each for automatically managing delivery of one or more interviews to one or more targeted persons and through a manager-specific communications channel; and

(b) a delivery scheduler operatively coupled to the plural channel managers for automatically delegating delivery-attempt responsibilities for specific ~~messages~~ interviews to respective subsets of the plural channel managers and for undoing respective ones of said delegations when one of the channel managers succeeds in delivering completing delivery of a respective one of the specific ~~messages~~ interviews to a corresponding targeted person.

16. *(currently amended)* A scalable machine-implemented, communications delivering and response collecting system comprising:

(a) an application server for processing respective data communications under pre-assigned service-organization designations (applications); and

(b) a database for storing:

(b.1) respective, communication processing rules of respective ones of said pre-assigned service-organization designations; and

(b.2) persons records defining person attributes of respective persons who can have service-providing and/or service receiving roles under each of said service-organization designations;\_\_\_

wherein said application server uses the communication processing rules of a given one of said service-organization designations to control instantiation of deliverable interviews formulated under responsibility of the given service-organization designation.

17. (*original*) For use in a service providing organization, a machine-implemented method for increasing likelihood that service-related communications will be delivered to and retrieved by communications-targeted persons, said machine-implemented method comprising:

(a) adaptively defining multi-channel delivery strategies over time for potential, communications-targeted persons based on previous delivery-attempt histories so as to increasing likelihood of delivery success to specific ones of said potential, communications-targeted persons when a next communication is targeted to one or more of such potential, communications-targeted persons;

(b) requesting confirmation by communications-targeted persons of receipt and understanding of delivered ones of said communications; and

(c) if failed delivery-attempts exceed predefined thresholds or communications-targeted persons fail to confirm receipt and understanding of delivered ones of said communications within predefined time limits, routing alerts to responsible persons within the service providing organization asking them to respond to the failed communications attempts.

18. (*new*) The machine-implemented notifying method of Claim 1 wherein said at least one care-concerned person includes a member of the group comprising a medical service provider and a medical assistant.

19. (*new*) The machine-implemented notifying method of Claim 1 wherein said at least one notification-worthy situations definitively include:

(0.2) said in-completion of a care-related communication delivery-attempt where said in-completion of the delivery-attempt calls for relatively prompt attention thereto; and

(0.3) said in-completion of a care-related task where said in-completion of the care-related task calls for relatively prompt attention thereto.

20. (new) The machine-implemented notifying method of Claim 2 wherein said at least one care-concerned person includes a member of the group comprising a medical service provider and a medical assistant .

21. (new) The machine-implemented notifying method of Claim 6 wherein said at least one care-concerned person includes a member of the group comprising a medical service provider and a medical assistant.

22. (new) An alerting mechanism for alerting a health care-concerned person to a health care-related situation constituted by at least one of the following situations:

(0.1) completion of a care-related task where said task completion calls for relatively prompt attention thereto by the health care-concerned person or another person;

(0.2) incompleteness of a care-related communication delivery-attempt where said incompleteness of the delivery-attempt calls for relatively prompt attention thereto by the health care-concerned person or another person;

(0.3) incompleteness of a care-related task where said incompleteness of the care-related task calls for relatively prompt attention thereto by the health care-concerned person or another person; and

(0.4) an unexpected change or a lack of expected change in a medical condition of a given patient where said unexpected change or lack of expected change calls for relatively prompt attention thereto by the health care-concerned person or another person;

where said alerting mechanism comprises:

(a) action advising means for automatically advising the care-concerned person of an attention-giving action that is advised to be provided by the care-concerned person or delegated to another care-concerned person in response to an alerted situation; and

(b) topic defining means for automatically advising the care-concerned person of the medical concern that is addressed by the alerted situation; and

(c) patient identifying means for automatically advising the care-concerned person of the identity of one or more patients associated with a correspondingly advised attention-giving action and a corresponding medical concern that is addressed by the alerted situation.

23. (new) The alerting mechanism of Claim 22 wherein:

(a.1) said action advising means includes means for advising the care-concerned person to provide at least one attention-giving action selected from the attention-giving group consisting of:

- (a.1a) initiating a sending of test results and a message to a tested patient;
- (a.1b) reviewing contents of an automated or semi-automated interview conducted with a corresponding patient; and
- (a.1c) becoming aware of a failed attempt to deliver a communication relating to a corresponding patient.

24. (new) The alerting mechanism of Claim 22 wherein:

(b.1) said topic defining means includes means for advising the care-concerned person of at least one of medical concerns in a topic group consisting of:

- (b.1a) an identifier of a blood component that is of concern;
- (b.1b) an identifier of a chronic disease that is of concern;
- (b.1c) an identifier of an on-setting disease that is of concern;
- (b.1d) an identifier of a body part or body system that is of concern;
- (b.1e) an identifier of a medical related, scheduled event that is of concern;
- and
- (b.1f) an identifier of a type of test or other medical procedure that is of concern.

25. (new) The alerting mechanism of Claim 22 wherein:

(d.1) said situation identifying means includes means for advising the care-concerned person of at least one of situation types in a situation type group consisting of:

(d.1a) a retrieval failure situation in which a corresponding communication delivery attempt was not timely or fully completed; and

(d.1b) an information-triggered situation in which information gathered during a corresponding communication delivery attempt triggered the alerted situation.

26. (new) The alerts summarizing mechanism of Claim 7 and further comprising:

(c) summarized alerts reporting means for delivering predefined summarizations of the prioritized alert reports to at least one person responsible for reacting to the alert reports.

27. (new) A machine-implemented follow-up method for use in providing health care services to patients, the method comprising:

- (a) defining in machine-readable storage, one or more delivery deadlines by which respective deliveries of one or more, corresponding health care services to respective patients are to be timely completed;
- (b) automatically first determining whether or not each health care service having a corresponding delivery deadline has been timely and completely received by the respective patient; and
- (c) automatically delivering corresponding alerts to one or more persons responsible for completion of delivery of a given health care service having one of said delivery deadlines if, among other alert generating criteria, the given health care service is determined by said automatic first determining step to have been not timely and completely received by the respective patient.

28. (new) The machine-implemented follow-up method of Claim 27 wherein:

said health care services to be timely and completely delivered to respective patients include machine-conducted interview dialogs that are to be timely delivered to, and completed by respective patients; and

- (c.1) said automatic delivering of corresponding alerts includes automatically prioritizing alerts relating to nondelivery to, or noncompletion of interview dialogs by respective patients in accordance with predefined interview alert importance rules; and
- (c.2) said automatic delivering of corresponding alerts includes automatically sorting prioritized alerts so that the one or more responsible persons will be presented with interview nondelivery/noncompletion alerts having relatively high priority before being made aware, if at all, of interview nondelivery/noncompletion alerts having lower priority.

29. (new) The machine-implemented follow-up method of Claim 27 wherein:

said health care services to be timely and completely delivered to respective patients include medical test result reporting dialogs that are to be timely delivered to, and acknowledged by respective patients; and

- (c.1) said automatic delivering of corresponding alerts includes automatically prioritizing alerts relating to nondelivery to, or nonacknowledgement of medical test result reporting dialogs by respective patients in accordance with predefined test-result report alert importance rules; and
- (c.2) said automatic delivering of corresponding alerts includes automatically sorting prioritized alerts so that the one or more responsible persons will be made aware of test-result report nondelivery/nonacknowledgement alerts having relatively high priority before being made aware, if at all, of test-result report nondelivery/nonacknowledgement alerts having lower priority.



30. (new) The machine-implemented follow-up method of Claim 29 and further including:

(d) instructing patients to contact their health care providers if they do not automatically receive an expected medical test result reporting dialog.

31. (new) The machine-implemented follow-up method of Claim 27 wherein:

said health care services to be timely and completely delivered to respective patients include medical treatment result feedback dialogs that are to be timely delivered to, and responded upon by respective patients; and

(c.1) said automatic delivering of corresponding alerts includes automatically prioritizing alerts relating to nondelivery to, or nonresponsiveness to medical treatment result feedback dialogs by respective patients in accordance with predefined treatment-result feedback alert importance rules; and

(c.2) said automatic delivering of corresponding alerts includes automatically sorting prioritized alerts so that the one or more responsible persons will be made aware of treatment-result feedback nondelivery/nonresponsiveness alerts having relatively high priority before being made aware, if at all, of treatment-result feedback nondelivery/nonresponsiveness alerts having lower priority.

32. (new) The machine-implemented follow-up method of Claim 27 wherein:

said health care services to be timely and completely delivered to respective patients include periodic health maintenance feedback dialogs that are to be timely delivered to, and responded upon by respective patients; and

(c.1) said automatic delivering of corresponding alerts includes automatically prioritizing alerts relating to nondelivery to, or nonresponsiveness to periodic health maintenance feedback dialogs by respective patients in

accordance with predefined periodic health maintenance alert importance rules; and

- (c.2) said automatic delivering of corresponding alerts includes automatically sorting prioritized alerts so that the one or more responsible persons will be made aware of periodic health maintenance nondelivery/non-responsiveness alerts having relatively high priority before being made aware, if at all, of periodic health maintenance nondelivery/non-responsiveness alerts having lower priority.

33. (new) Manufactured instructing signals for causing a correspondingly instructable machine to automatically carry out a machine-implemented method for use in providing health care services to patients, the method comprising:

- (a) defining one or more delivery deadlines by which respective deliveries of one or more, corresponding health care services to respective patients are to be timely completed;
- (b) determining whether or not each health care service having a corresponding delivery deadline has been timely and completely received by the respective patient; and
- (c) delivering corresponding alerts to one or more persons responsible for completion of delivery of a given health care service having one of said delivery deadlines if, among other alert generating criteria, the given health care service is determined by said determining step to have been not timely and completely received by the respective patient.

34. (new) A machine-implemented method for use in providing health care services to patients, under supervision of medically-trained care providers, the method comprising:

- (a) defining in machine-readable storage, one or more representations of corresponding health care services that are planned to be respectively delivered to one or more respective patients;

- (b) automatically first determining whether or not each planned health care service needs review and/or customization by a medically-trained care provider before being delivered to a corresponding patient;
  - (c) defining in machine-readable storage, one or more review deadlines by which corresponding planned health care services that are determined to need said review and/or customization are to be reviewed and/or customized by a specified one or more medically-trained care providers;
- and
- (d) automatically delivering corresponding need-review alerts to one or more persons responsible for completion of the review and/or customization of a given health care service having one of said review deadlines if, among other alert generating criteria, the given health care service is automatically determined to have been not timely reviewed and/or customized by one of said specified one or more medically-trained care providers.

35. (new) An automated machine system for providing machine-implemented follow-ups on progress in providing health care services to patients, the system comprising:

- (a) machine-readable storage in which is defined, one or more delivery deadlines by which respective deliveries of one or more, corresponding health care services to respective patients are to be timely completed;
- (b) first means for automatically determining whether or not each health care service having a corresponding delivery deadline has been timely and completely received by the respective patient; and
- (c) second means for automatically delivering corresponding alerts to one or more persons responsible for completion of delivery of a given health care service having one of said delivery deadlines if, among other alert generating criteria, the given health care service is determined by said first means to have been not timely and completely received by the respective patient.

36. (new) The automated machine system of Claim 35 and further comprising:

- (d) alert sorting means for automatically sorting prioritized alerts so that the one or more responsible persons will be presented with service nondelivery/-noncompletion alerts having relatively high priority before being made aware, if at all, of service nondelivery/noncompletion alerts having lower priority.

37. (new) An automated machine system for providing machine-supported health care services to patients, under supervision of medically-trained care providers, the system comprising:

- (a) machine-readable storage having defined therein one or more representations of corresponding health care services that are planned to be respectively delivered to one or more respective patients;
- (b) first means for automatically determining whether or not each planned health care service needs review and/or customization by a medically-trained care provider before being delivered to a corresponding patient;
- (c) second means for defining in machine-readable storage, one or more review deadlines by which corresponding planned health care services that are determined to need said review and/or customization are to be reviewed and/or customized by a specified one or more medically-trained care providers; and
- (d) alert means for automatically delivering corresponding need-review alerts to one or more persons responsible for completion of the review and/or customization of a given health care service having one of said review deadlines if, among other alert generating criteria, the given health care service is automatically determined to have been not timely reviewed and/or customized by one of said specified one or more medically-trained care providers.

38. (new) An automated machine system for providing machine-supported customization in the provision of health care services to patients, the system comprising:

- (a) first machine-readable storage having defined therein one or more representations of corresponding health care services that can be respectively delivered to one or more respective patients;
- (b) second machine-readable storage having defined therein one or more representations of unique attributes associated with a unique one or more of said respective patients; and
- (c) service formulating means for automatically providing customizable formulation support for formulating of a planned and deliverable health care service to a corresponding patient, wherein said service formulating means is operatively coupled to the second machine-readable storage for integrating the unique attributes of the corresponding patient with the customizable formulation support so that a customized health care service can be automatically planned based on said unique attributes of the corresponding patient.

39. (new) The automated machine system of Claim 38 wherein: said planned and deliverable health care service includes one or more interviews to be delivered to the corresponding patient; and

- (c.1) said service formulating means includes means for automatically integrating the unique attributes of the corresponding patient with customizable formulation support provided for formulating one or more deliverable interviews so that said one or more deliverable interviews can be automatically formulated based on said unique attributes of the corresponding patient.

40. (new) The automated machine system of Claim 38 wherein: said unique attributes of a given patient include two or more of:

- (b.1) identifications of service delivery channels preferred by the given patient;
- (b.2) identifications of service delivery times preferred by the given patient for one or more of the identified service delivery channels;
- (b.3) values of medication dosaging parameters useful for determining dosages of medication to be prescribed to the given patient, said medication dosaging parameters including an indication of a last known weight of the given patient;
- (b.4) identifications of current medications the given patient is last known to be receiving;
- (b.5) identifications of allergies the given patient is last known to have;
- (b.6) identifications of chronic medical conditions the given patient is last known to have; and
- (b.7) identifications of major hospitalizations or operations the given patient is last known to have had.

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